

REMARKS

This application has been reviewed in light of the Office Action dated March 4, 2005. Claims 15-22 and 45-50 are presented for examination, of which Claims 15, 19, 45, and 48 are in independent form. Claims 15-17, 19-21, and 45-50 have been amended to define Applicant's invention more clearly. Favorable reconsideration is requested.

Applicants gratefully acknowledge the indication that Claims 16, 17, 20, 21, 46, 47, 49, and 50 include allowable subject matter would be allowable if rewritten in proper independent form. For at least the reasons set forth below, Applicants respectfully decline to so rewrite these claims at this time.

The Office Action indicates that Claims 15, 18, 19, 22, 45, and 48 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,614,914 (Rhoads et al.). Applicants submit that independent Claims 15, 19, 45, and 48, together with the claims dependent therefrom, are patentably distinct from Rhoads et al. for at least the following reasons.

An aspect of the present invention set forth in Claim 15 is directed to a method of estimating an orientation angle of a local structure of a portion of an image. The portion of the image represents a region of the image having a substantially linear structure. According to the method, a complex energy operator is used to determine an energy encoded representation of the portion of the image; a phase component of the energy encoded representation is determined; and an estimation of the orientation angle of the local structure of the portion of the image is determined from the phase component of the energy encoded representation.

Rhoads et al. relates to digital watermarking of media content such as images,

audio data, and video data. A process for estimating scale and orientation of image blocks relative to a known watermark pattern is described with reference to Fig. 14. As understood by Applicants, the image blocks are described as blocks of image data in which a watermark is replicated in each of the blocks (see column 10, lines 7-9, and Fig. 2). The process starts with a number of filtering steps (952-954), followed by a Fast Fourier Transform (FFT) step (956). Rhoads et al. also describes an alternative implementation in which only a phase signal of the FFT is retained for estimating a translation parameter of the orientation of the image block.

In the “Response to Arguments” section of the Office Action, Rhoads et al. is applied to independent claim 15 by construing the “complex energy operator” of the claim as the watermark, and by construing the “energy encoded image” of the claim as the watermarked image. Also, the orientation of the local structure of the image is construed in the Office Action to be the orientation of blocks of the image.

Applicants respectfully submit that Rhoads et al. may no longer be properly applied to Claim 15 in the manner set out in the “Response to Arguments” section of the Office Action. Using the corresponding terms read into the claims, as indicated in the Office Action, Rhoads et al. fails to disclose or suggest determining a watermarked image using a watermark.

Further, nothing has been found in Rhoads et al. that is believed to teach a method of estimating an orientation angle of a local structure of a portion of an image, in which the method includes “determining, using a complex energy operator, an energy encoded representation of the portion of the image,” and “determining a phase component of the energy encoded representation,” and “determining an estimation of the orientation angle of the local

structure of the portion of the image from the phase component of the energy encoded representation,” as recited in Claim 15.

Accordingly, Applicants submit that Claim 15 is clearly patentable over Rhoads et al., and respectfully request withdrawal of the rejection under 35 U.S.C. § 103(a).

Independent Claim 19 is an apparatus claim corresponding to Claim 15, and is believed to be patentable for substantially the same reasons as discussed above in connection with Claim 15. Additionally, independent Claims 45 and 48 include features that are similar in many relevant respects to those discussed above in connection with Claim 15. Accordingly, Claims 45 and 48 are also believed to be patentable for substantially the same reasons as discussed above in connection with Claim 15.

The other rejected claims in this application depend from one or another of the independent claims discussed above. Therefore, those claims are submitted to be patentable for at least the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

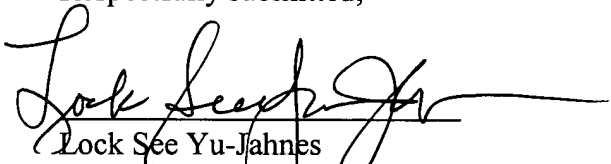
The present Amendment After Final Action is believed clearly to place this application in condition for allowance. Therefore, entry of this Amendment is believed proper under 37 C.F.R. § 1.116 and is respectfully requested, as an earnest effort to advance prosecution and reduce the number of issues. Should the Examiner believe that issues remain outstanding, it is respectfully requested that the Examiner contact Applicants’ undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

No petition to extend the time for response to the Office Action is deemed necessary for the present Amendment. If, however, such a petition is required to make this Amendment timely filed, then this paper should be considered such a petition and the Commissioner is authorized to charge the requisite petition fee to Deposit Account 06-1205.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,


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